

components and adjustment of the degree of condensation.

5 The coating materials of the invention, especially the powder coating materials of the invention, are obtained by mixing the polymers (A) and (B) in a proportion of from 99.5:0.5 to 0.5:99.5. Preference is given to proportions of from 90:10 to 50:50, and particular preference to proportions of from 80:20 to 60:40.

10 In order to increase the photosensitivity of the coating materials of the invention it is possible to use the customary photoinitiators, even if photoinitiator groups II are present in the binder mixtures
15 of the invention. However, the use of the photoinitiator groups II is preferred.

The coating materials of the invention, especially the powder coating materials of the invention, may further
20 comprise customary and known coatings ingredients, such as flow improvers, UV stabilizers, devolatilizing auxiliaries (e.g., benzoin) or colorants and fillers. The coating materials of the invention, especially the powder coating materials of the invention, are prepared
25 by the known technologies, preferably in an extruder. In this context the very good thermal stability of the binder mixtures of the invention is a considerable

advantage, since there is no risk of thermal damage within the extruder.

The coating materials of the invention, especially the powder coating materials of the invention, may be applied to a very wide variety of substrates using the known application techniques. A considerable acceleration in curing with actinic radiation, especially UV radiation, is possible with the combined application of heat and actinic radiation, especially UV light. Accordingly, it is possible to employ UV-curable powder coating materials of the invention on heat-sensitive substrates such as plastic and wood; in this case only the surface is heated, preferably with IR radiation, to the extent required to melt the powder, then UV light is irradiated. Curing through the combination of heat and UV radiation then takes place so rapidly that it is possible to rule out damage to the substrate.

20

At the curing stage a further possibility is to use one or more thermal curing mechanisms, known per se, as well, examples being cocrosslinking with polyfunctional isocyanates, aminoresins such as melamine, urea or benzoguanamine formaldehyde resins, or polyfunctional epoxides. The crosslinking mechanisms which can be employed additionally may also lead to the formation of

interpenetrating networks in the coatings of the invention, as a result of which special, desirable properties, such as particularly high chemical resistance, are often achieved.

5

Overall, the binder mixtures of the invention and the coating materials of the invention, especially the powder coating materials of the invention, are outstandingly suitable for automotive OEM finishing, automotive refinish, industrial coating, including coil coating and container coating, the coating of plastics, and furniture coating, and give substrates of coatings of the invention to satisfy the continually growing requirements of the market.

15

Examples

Preparation example 1

20 The preparation of the precursor 1 of the structural unit V (monocarboxylic acid V)

661.10 g of dicyclopentadiene (5.0 mol) and
490.30 g of maleic anhydride (5.0 mol)

25